Reliable and High-Performance WiFi ('n' models only)

The Vigor 2850 Series 'n' models feature 802.11n wireless LAN specification and has been certified by the WiFi alliance for cross compatibility and WiFi compliance (including WPA/WPA2 and WMM). The Vigor2850n and Vn models includes a hardware co-processor for WiFi which can provide an increase of up to 40Mb/s for WiFi connections compared to our other models.

802.11n provides a total wireless bandwidth of up to 300Mb/s using new methods such as packet aggregation and channel bonding. Throughput depends on your own environment (factors such as obstructions, number of hosts and distance all make a significant difference), but actual transfer speeds of over 100Mb/s are achievable (based on our real world tests). In addition, 802.11n provides greater coverage and resilience to interference compared to previous wireless standards thanks to the MIMO technology and the Vigor's triple-antennae diversity arrangement. This offset arrangement of aerials provides offset paths between hosts so that interference can be overcome.

Selectable Dual-Band

The Vigor 2850n and 2850Vn includes Dual-Band technology. Most commonly, WiFi operates in the "2.4Ghz" band but with the number of people using Wifi these days, all sharing the same channels as well as DECT and Bluetooth also using the same band, congestion is a real problem. Everyone has to share the same bandwidth, and 802.11n uses three times as much as previous technologies. The Vigor2850n and Vn models can be switched to use the 5.8Ghz band instead which is far less congested. If your laptop of wireless device does not support the 5.8Ghz band, you will need a add a USB 'dongle', also available from DrayTek.

Wireless Security

The Vigor 2850 Series provides several independent levels of security including encryption (up to WPA2), authentication (802.11x) and methods such as MAC address locking and DHCP fixing to restrict access to authorised users only. The Web interface lets you see how many and which clients are currently connected as well as their current bandwidth usage. An 'instant' block lets you disconnect a wireless user temporarily in case of query. The Wireless VLAN facility allows you to isolate wireless clients from each other or from the 'wired' LAN.

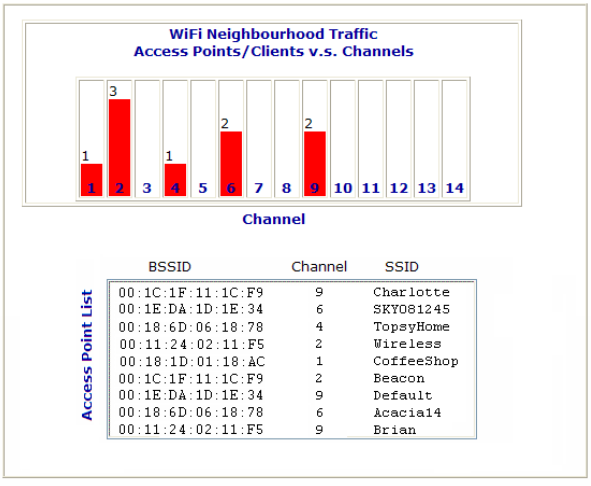
The Vigor2850 wireless versions also allow guest access with password protection so that visitors can use your WiFi access, but only with a password which you set for them. When the user connects to your wireless LAN, they are firstly presented with your login screen before any Internet access is permitted. This is in addition to any encryption system you have running.

The Multiple SSID features enable you to have up to four distinct or common virtual wireless access points. For example, you could have one for company usage, with access to your company LAN and another for public access which allows internet surfing only. Setting up wireless security is made easier thanks to the WPS feature (WiFi protected setup) whereby your client PC can get it's security keys by pressing a button on the front of the router.

If your laptop PC's built-in wireless doesn't support 802.11n wireless or the 5.8GhZ band and you want to take advantage of that, you can use the optional Vigor N65 USB adaptor.

For specialist or more demanding coverage applications, optional aerials can be used with the Vigor 2850 to potentially increase the range of wireless coverage (depending on environment) or provide directional coverage in order that your wireless transmission is focussed and concentrated into one direction only, for example into a room or across open space. With the increasing popularity of wireless LANs, you will want to choose the least congested wireless channel (Nos. 1-13) for yours so the Vigor can scan and provide a list of all devices in the vicinity so that you can choose the best channel (see screenshot below).

- 802.11n Compliant
- Switchable Dual-Band (2.4Ghz or 5.8Ghz)
- Hardware wireless co-processor for increased throughput
- 'MIMO' Technology with three aerials (2T3R) for diversity
- Packet Aggregation and Channel Bonding
- Optional Higher Gain or directional aerials available
- Also Compatible with 802.11b and 802.11g Standards
- Active Client list in Web Interface
- Wireless LAN Isolation (from each other and/or wired LAN)
- 64/128-bit WEP Encryption
- WPA/WPA2 Encryption
- WPS - WiFi Protected Setup for client security setup
- Switchable Hidden SSID
- Restricted access list for clients (by MAC address)
- Time Scheduling (WLAN can be disabled at certain times of day)
- Access Point Discovery
- WDS (Wireless Distribution system) for Bridging and Repeating
- 802.1x Radius Authentication
- Wireless Rate-Control
- Automatic Power Management
- 802.11e WMM (Wi-Fi Multimedia)

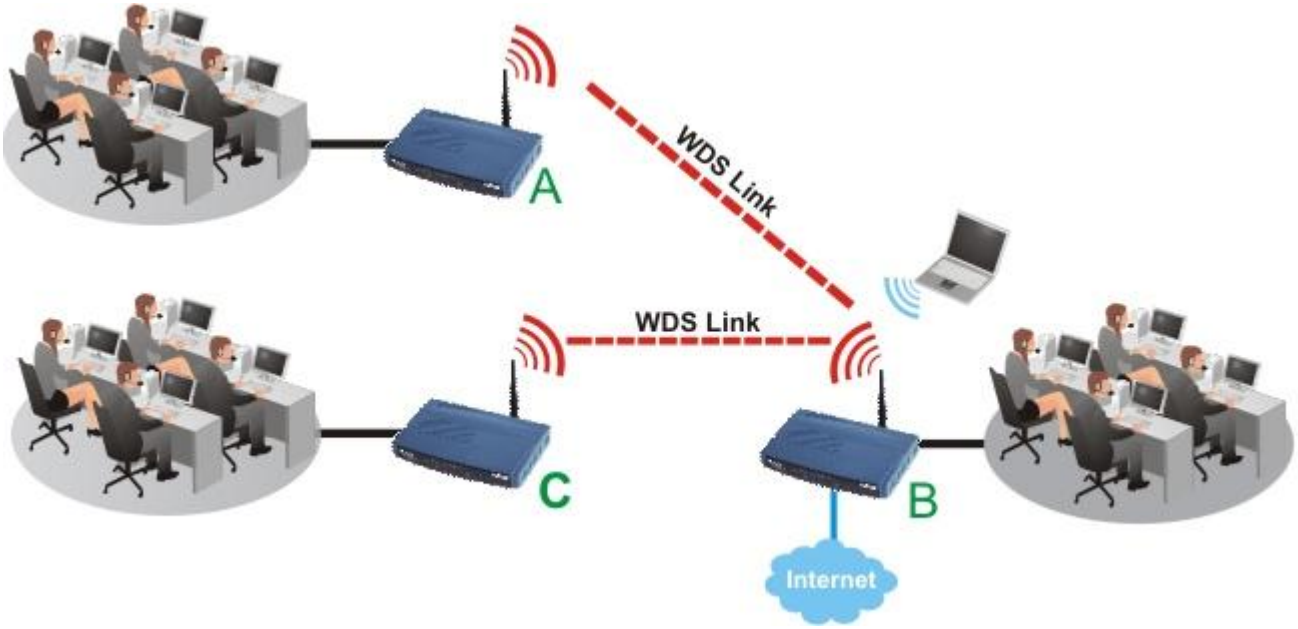


Above : The Vigor2820n provides a local survey of other access points so that you can choose the least congested channel.

Wireless LAN WDS Facility

Vigor 2850 'n' models support **WDS** (Wireless Distribution System) which enables you to use the wireless capability to bridge to another network, within wireless range. You need an additional compatible wireless router for this of course. Here is a simple example:

With WDS bridging, both networks should be within the same logical IP subnet (IP address range). Once set up, all of the PCs on both sides of the link can access each other, across the wireless bridge. Local wireless devices such as a laptop can continue to use their local access point.



An additional mode, as shown above, called 'repeating', allows you to set up a third station. In the diagram below, the router at 'B' is set up in repeating mode, relaying traffic between LANs at A and C. Therefore, all three physical networks can communicate with each other over the wireless links.

Important Note : Wireless performance (speed and range) always depends on your specific environment and will vary considerably. Factors affecting performance include wireless traffic, other networks nearby, site construction, walls, ceilings and other electronic equipment nearby. The product may not be upgradable to future 802.11n standards or be compatible with products from other manufacturers. Speeds quoted are the maximum wireless capacity, including RX/TX capacity, protocol overheads and all clients/hosts connected.